

Cumulative Innovation: Breadth and Standards for Protection

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Policy Objectives: Two Views

1. Divide profit so every generation is protected
(recognizing that each generation builds on the last)
2. Ensure efficient “prospecting” (Kitch)

In my testimony of February 26, I focussed on the latter; here I will focus on the former.

Example: Semiconductor Chips

- Expensive to develop (\$40m-\$50)
Cheap to clone (\$50K-\$100K).
- Conflicting economic goals:
 - Use prior knowledge for further improvement
 - Protect each innovator against competition
- Semiconductor Chip Protection Act 1984
Allows reverse engineering but has a “forward engineering” or “breadth” requirement
Patent-like protection (without disclosure)

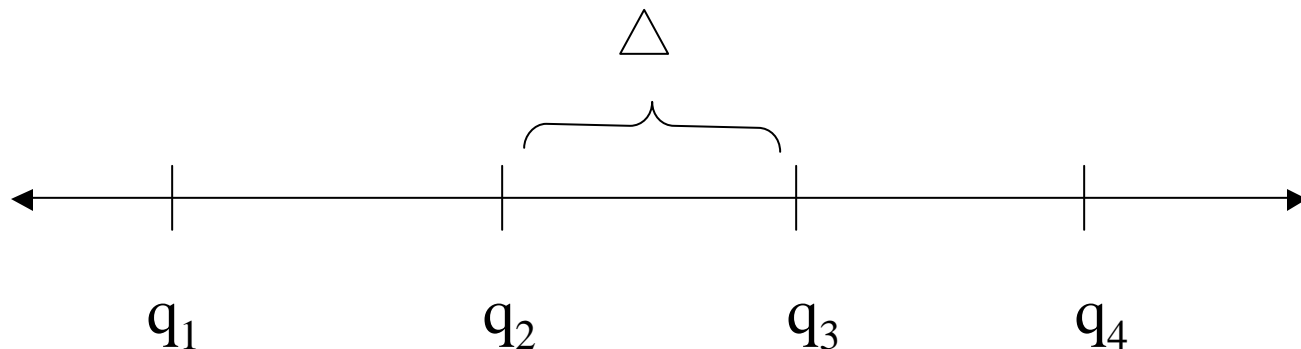
Intellectual Property on a quality ladder.

Basic Problem: There is a large discrepancy between the profit and social value of each incremental improvement:

Benefit of each improvement: Δ/r

Cost of each improvement: c

Profit earned by each improvement: Δ



Intellectual Property on a quality ladder.

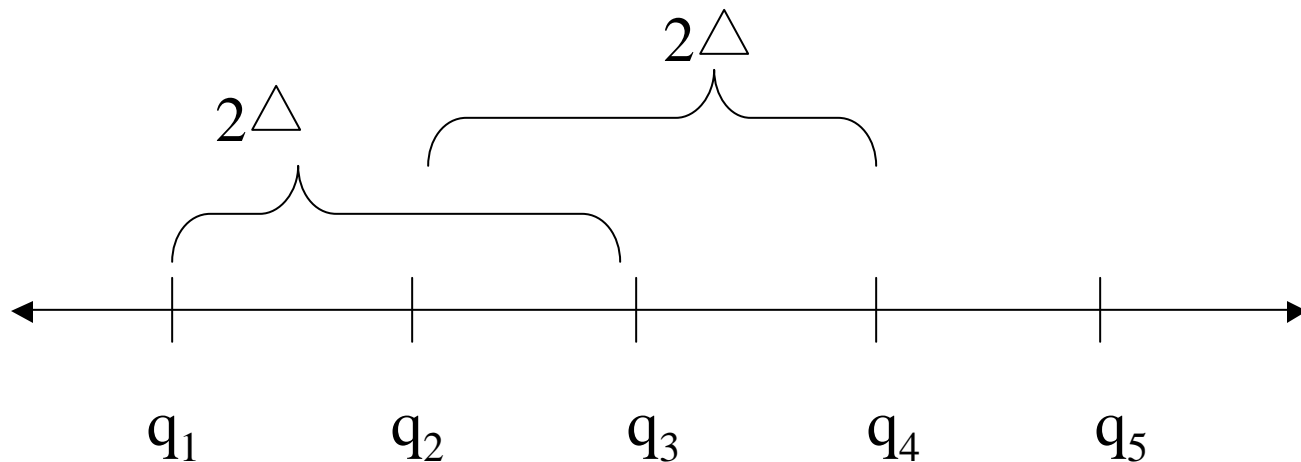
Two Tools of Intellectual Property

Main tool: leading breadth

(what improvements infringe?)

patentable step

(what improvements are protected?)



Downside Risk:

- Wrong leading breadth:
 - Too narrow: competition stifles invention
 - Too broad: too much consolidation
- Wrong patentability Standard:
 - Standard too high:
 - Might stifle follow-ons
 - Solution: Previous patentholders (Kitch)
 - Standard too low:
 - Might result in unnecessary patents.
 - Solution: Make each patent narrow.

Conclusion

- It might be more important to get the (leading) breadth right than to get the standard of patentability right.
- Compare: copyright and patent

In copyright we have never worried that essentially everything (within subject matter) is copyrightable.